

ORGANIZATION OF COAST AND GEODETIC SURVEY.

LETTER

FROM

THE SECRETARY OF THE TREASURY,

IN RESPONSE TO

A resolution of the House of Representatives concerning the present organization of the Coast and Geodetic Survey.

FEBRUARY 4, 1879.—Referred to the Committee on the Public Lands and ordered to be printed.

TREASURY DEPARTMENT, *February 3, 1879.*

SIR: In compliance with the resolution of the House of Representatives, dated the 16th ultimo, I have the honor to transmit herewith a copy of a letter from Mr. C. P. Patterson, Superintendent, and a statement furnished by him, which show the present organization of the United States Coast and Geodetic Survey, including the number of persons employed in its service during the present fiscal year, their several ranks or positions, the salary or compensation of each, and the general nature of the duties performed by each, where each employé is at present located; and, also, a copy of a statement by the Superintendent of said service covering the aid received from the United States naval forces.

I am, very respectfully,

JOHN SHERMAN, *Secretary.*

Hon. SAMUEL J. RANDALL,
Speaker of the House of Representatives.

UNITED STATES COAST AND GEODETIC SURVEY OFFICE,
Washington, January 29, 1879.

SIR: I have the honor to transmit, as requested in your letter of the 18th of January, instant, a report called for by a resolution of the House of Representatives, specifying the number and occupation of persons employed in the work of the Coast and Geodetic Survey since the beginning of the present fiscal year.

Full particulars in regard to the work at the beginning of that year are given in my detailed report, which, as required by law, was presented to the House of Representatives on the 17th of December last.

Very respectfully, yours,

C. P. PATTERSON, *Superintendent.*

Hon. JOHN SHERMAN,
Secretary of the Treasury.

Statement showing the number of persons in the employment of the United States Coast and Geodetic Survey in the present fiscal year, the compensation received, general nature of the work done, where employed, with a statement showing the assistance received from the United States Navy for the period named.

Name.	Occupation.	Rate of pay.	Location and general nature of duties.
C. P. Patterson.....	Superintendent.....	\$6,000 per annum.	Office, Washington.
J. E. Hilgard.....	Assistant in charge of office.	\$4,200 per annum.	Do.
George Davidson.....	Assistant.....	\$3,730 per annum.	Office, San Francisco; preparing for field-work main triangulation, astronomical, and other work.
Richard D. Cutts.....	do.....	\$3,620 per annum.	Office, Washington; computing his triangulation work of last season.
C. O. Boutelle.....	do.....	do.....	Norfolk; computing triangulation and astronomical work of last season.
Henry Mitchell.....	do.....	\$3,260 per annum.	Boston; computing and directing office-work; physical hydrography.
Hy. L. Whiting.....	do.....	\$3,160 per annum.	Boston; completing drawing of his last season's topographical work.
F. H. Gerdes.....	do.....	\$3,150 per annum.	Hoboken; completing office-work of his last season's field-work.
W. W. Cooper.....	do.....	\$3,480 per annum.	Washington, superintendent's office.
George W. Dean.....	do.....	\$2,870 per annum.	Atlanta; determining telegraphic longitudes.
C. S. Peirce.....	do.....	do.....	New York and Allegheny, Pa.; pendulum observations.
W. E. Greenwell.....	do.....	\$2,750 per annum.	Near San Luis Obispo, Cal.; in the field; topographical work.
A. F. Rodgers.....	do.....	\$2,640 per annum.	Washington; just returned from primary triangulation, Utah and Nevada.
George A. Fairfield.....	do.....	\$2,180 per annum.	Saco, Me.; office-work of his last season's triangulation.
J. A. Sullivan.....	do.....	do.....	Malden, Mass.; office-work of his last season's triangulation.
A. M. Harrison.....	do.....	\$1,200 per annum.	Plymouth, Mass.; invalid; at work on history of "Plane Table."
James S. Lawson.....	do.....	\$2,120 per annum.	Olympia, Wash.; office-work of his last season's triangulation.
Cleveland Rockwell.....	do.....	do.....	In field; triangulation and topography of Columbia River.
A. W. Longfellow.....	do.....	\$2,070 per annum.	Portland, Me.; office-work of his last season's topographical work.
W. H. Dennis.....	do.....	do.....	In field; Mississippi River triangulation and topography.
Edward Goodfellow.....	do.....	\$2,010 per annum.	Office; Washington.
Charles M. Bache.....	do.....	do.....	Philadelphia; just closed triangulation work and preparing for field topography near Norfolk, Va.
R. M. Bache.....	do.....	do.....	Philadelphia; office and field topography; Philadelphia river front.
John W. Donn.....	do.....	do.....	James River; in field; triangulation and topography.
A. T. Mosman.....	do.....	do.....	Beverly, Mass.; computing his triangulation work of last season.
C. H. Boyd.....	do.....	\$1,950 per annum.	In field; Mississippi River triangulation.
Charles Hosmer.....	do.....	do.....	Do.
C. T. Iardella.....	do.....	\$1,900 per annum.	In field; topography near Charleston and on Cape Fear River.
J. S. Bradford.....	do.....	do.....	Office; Coast Pilot work.
S. C. McCorkle.....	do.....	\$1,840 per annum.	Philadelphia; office-work of his triangulation, &c.
R. E. Halter.....	do.....	\$1,800 per annum.	In field; triangulation southern coast of Texas.
Fred. F. Nes.....	do.....	\$1,780 per annum.	Invalid, York, Pa.; office-work on annual report.
L. A. Sangteller.....	do.....	\$1,750 per annum.	In field; topography coast north of San Francisco.
H. G. Ogden.....	do.....	do.....	Office-work, Washington; in field last season, topographical work.
Gershom Bradford.....	do.....	\$1,610 per annum.	In field; hydrography, Suisun Bay, Cal.

Statement showing the number of persons in the employment of the United States Coast and Geodetic Survey, &c.—Continued.

Name.	Occupation.	Rate of pay.	Location and general nature of duties.
H. L. Marindin.....	Assistant.....	\$1,600 per annum..	Boston; office-work of his last summer and fall work, hydrography.
William Eimbeck.....	do.....	do.....	Office, Washington; computing his last season's work, triangulation.
J. J. Gilbert.....	do.....	do.....	Olympia, Wash. T.; computing and drawing his triangulation and topographical work.
F. W. Perkins.....	do.....	do.....	In field; Mississippi River triangulation.
Stehman Forney.....	do.....	do.....	In field; topography Santa Barbara Islands, Cal.
O. H. Tittmann.....	do.....	\$1,500 per annum..	Office, Washington; on his base and triangulation work of last season.
F. D. Granger.....	do.....	do.....	In field; Northern Mississippi primary triangulation.
B. A. Colonna.....	do.....	do.....	Office, San Francisco; last summer and fall work of triangulation.
Edwin Smith.....	do.....	\$1,450 per annum..	In field; telegraphic longitudes.
E. Hergesheimer.....	do.....	\$2,100 per annum..	Office, Washington; compiling work on topographical drawing.
William H. Dall.....	Acting assistant.....	\$1,500 per annum..	Office, Washington; compiling Alaska Coast Pilot.
W. Irving Vinal.....	Subassistant.....	\$1,100 per annum..	In field; triangulation and topography east coast of Florida.
Joseph Hergesheimer.....	do.....	do.....	In field; triangulation and topography west coast of Florida.
Andrew Braid.....	do.....	\$1,250 per annum..	Office-work, Washington; computing last season's leveling.
Eugene Ellicott.....	do.....	\$1,300 per annum..	In field; triangulation in Puget Sound, Wash. T.
E. F. Dickins.....	do.....	\$2,200 per annum..	Office-work, San Francisco.
H. W. Blair.....	do.....	\$1,100 per annum..	Office-work, Washington; computing his last season's triangulation.
D. B. Wainwright.....	do.....	do.....	Office, Washington; just returned from Pacific coast.
Benjamin Peirce.....	Consulting geometer..	\$4,000 per annum..	Cambridge, Mass.; office-work.
Samuel Hein.....	Clerk.....	\$1,800 per annum..	Office, Washington.
W. B. Chilton.....	do.....	\$70 per month.....	Do.
J. W. Porter.....	Disbursing agent.....	\$2,500 per annum..	Do.
R. L. Hawkins.....	Bookkeeper.....	\$2,000 per annum..	Do.
C. A. Schott.....	Assistant in charge of Computing Division.	\$2,760 per annum..	Do.
G. Rumpf.....	Computer.....	\$1,740 per annum..	Do.
M. H. Doolittle.....	do.....	\$1,680 per annum..	Do.
Marcus Baker.....	do.....	\$1,500 per annum..	Do.
James Main.....	do.....	\$1,200 per annum..	Do.
F. A. Sawyer.....	do.....	\$100 per month.....	Do.
J. G. Porter.....	do.....	do.....	Do.
William Ferrel.....	do.....	\$1,400 per annum..	Do.
E. H. Courtenay.....	do.....	\$1,620 per annum..	Do.
L. J. Ferrel.....	do.....	\$45 per month.....	Kansas.
Paul Lobanoff.....	do.....	\$3.50 per day.....	Office, Washington.
M. E. Nesbitt.....	Writer.....	\$60 per month.....	Do.
R. S. Avery.....	Tide computer.....	\$2,000 per annum..	Do.
John Downes.....	do.....	\$800 per annum..	Do.
L. P. Shidy.....	do.....	\$900 per annum..	Do.
M. Thomas.....	Copyist.....	\$60 per month.....	Do.
W. T. Bright.....	Draughtsman.....	\$2,650 per annum..	Do.
A. Lindenköhl.....	do.....	\$2,350 per annum..	Do.
L. Karcher.....	do.....	\$5.75 per day.....	Do.
C. A. Meuth.....	do.....	\$4.25 per day.....	Do.
P. Erichson.....	do.....	\$4 per day.....	Do.
E. Molkow.....	do.....	do.....	Do.
E. J. Sommer.....	do.....	\$3 per day.....	Do.
H. Lindenköhl.....	do.....	\$175 per month.....	Do.
Hugo Eichholtz.....	do.....	\$3.50 per day.....	Do.
George A. Morrison.....	Writer.....	\$70 per month.....	Do.
E. Willenbacher.....	Hydrographic draughtsman.	\$2,000 per annum..	Do.
Charles Junken.....	do.....	\$1,800 per annum..	Do.
W. C. Willenbacher.....	do.....	\$3.20 per day.....	Do.
F. C. Donn.....	do.....	\$3.83 per day.....	Do.
G. Farquhar.....	do.....	\$1,800 per annum..	Office, San Francisco.
Vincente Denis.....	Janitor.....	\$73 per month.....	Do.
E. A. Maedel.....	Engraver.....	\$2,000 per annum..	Office, Washington.

Statement showing the number of persons in the employment of the United States Coast and Geodetic Survey, &c.—Continued.

Name.	Occupation.	Rate of pay.	Location and general nature of duties.
A. Sengteller	Engraver	\$1,800 per annum	Office, Washington.
H. M. Knight	do	\$5.50 per day	Do.
A. Peterson	do	do	Do.
William A. Thompson	do	do	Do.
John G. Thompson	do	\$5 per day	Do.
John J. Young	do	do	Do.
Edward H. Sipe	do	\$4.50 per day	Do.
W. H. Davis	do	\$3.75 per day	Do.
L. C. Kerr	Writer	\$3.25 per day	Do.
John H. Smoot	do	\$2 per day	Do.
W. A. Herbert	do	\$100 per month	Do.
W. B. French	do	do	Do.
C. Albert	do	\$75 per month	Do.
A. Zumbrock	Electrotypist	\$2,000 per annum	Do.
Frank Over	Assistant electrotypist	\$1,000 per annum	Do.
M. W. Wines	Clerk	\$1,500 per annum	Do.
Thomas McDonnell	Clerk in map-room	\$1,000 per annum	Do.
H. Nesson	Bookbinder	\$3.75 per day	Do.
George A. Stewart	Clerk, archives	\$1,500 per annum	Do.
John Clark	Instrument maker	\$5 per day	Do.
G. N. Saegmuller	do	do	Do.
William Jacobi	do	\$3.50 per day	Do.
Werner Suess	do	do	Do.
E. Echleman	do	\$3 per day	Do.
Frank Moore	Copper-plate printing	\$5 per day	Do.
D. N. Hoover	do	\$3 per day	Do.
James Beck	do	\$2.50 per day	Do.
John W. Reed	Laborer	\$1 per day	Do.
A. Yeatman	Carpenter	\$5 per day	Do.
C. Webster	do	\$1.50 per day	Do.
George W. Clarvoe	Laborer	50 cents per day	Do.
Richard M. Harvey	Copyist	\$50 per month	Do.
S. B. Walker	do	\$60 per month	Do.
J. Martin	do	\$45 per month	Do.
C. L. Barton	do	\$30 per month	Do.
P. P. Mullett	do	\$35 per month	Do.
C. B. Turnbull	do	\$60 per month	Do.
W. M. Rodes	Engineer of steamers	\$2,000 per annum	Steamer Hassler, Pacific coast.
W. H. Mapes	do	\$1,800 per annum	Baltimore, inspecting engineer.
F. H. Parsons	Aid	\$75 per month	Field; telegraphic longitude.
Robert A. Marr	do	\$30 per month	Office, Washington.
C. H. Sinclair	do	\$65 per month	Do.
W. H. Butler	Messenger	\$2.40 per day	Do.
Edward L. Savoy	do	\$2.30 per day	Do.
William Young	do	\$2.25 per day	Do.
Nelson Harrod	do	do	Do.
W. B. Ingram	do	\$1 per day	Do.
Charles Over	do	\$2 per day	Do.
Henry McKenzie	do	do	Do.
A. C. Whitney	Watchman	\$2.20 per day	Do.
B. Neff	do	\$2.15 per day	Do.
W. M. Long	do	do	Do.
H. W. Huber	do	do	Do.
Richard Waters	Fireman	\$2 per day	Do.
Forace Dyer	do	\$1.75 per day	Do.
W. D. Butler	Laborer	\$1.50 per day	Do.
Sarah E. Flynn	do	\$1 per day	Do.
Hazzard McCoy	Driver	\$55 per month	Do.
N. Hammerschlag	Drawing	Contract	Do.
J. Enthoffer	Engraver	By contract	Georgetown.
H. C. Evans	do	do	Washington.
F. Courtenay	do	do	Do.
R. F. Bartle	do	do	Do.
Randolph E. Bender	do	do	Do.
F. Wasserbach	do	\$3 per day	Office, Washington.
A. C. Ruebsam	do	\$30 per month	Do.
David Mason	Magnetic observer	\$2 per day	Madison, Wis., at Magnetic Ob-
R. T. Bassett	Tide observer	\$85 per month	servatory.
W. H. Pope	do	\$40 per month	Governor's Island, N. Y.
J. G. Spalding	do	\$76 per month	Fernandina, Fla.
J. W. Banford	do	\$35 per month	Fox Islands, Maine.
George Faust	do	\$15 per month	Sandy Hook, N. J.
Emmet Gray	do	\$80 per month	New Orleans, La.
Frank Morgan	Shipkeeper	\$50 per month	San Francisco Bay, Cal.
W. W. Duley	do	do	Head of Passes, Mississippi River.
John Forgerty	do	\$25 per month	Sailing-master schooner Caswell;
F. T. Roan	do	\$15 per month	coasts of North and South Caro-
			lina.

Hands employed from three to six months during present fiscal year.

Name and chief of party.	Character of work.	Number of hands.	Rate of pay per month.	
R. D. Cutts.....	Triangulation.....	3	\$40 00	Triangulation in New England.
C. O. Bontelle.....	do.....	6	30 00	Triangulation, Northern Alabama.
A. T. Mosman.....	do.....	7	40 00	Triangulation, West Virginia.
Edwin Smith.....	Telegraphic longitudes.....	1	75 00	Telegraphic longitudes.
F. D. Granger.....	Triangulation.....	3	33 00	Triangulation, Northern Mississippi.
S. C. McCorkle.....	do.....	1	25 00	Triangulation around Philadelphia and determining new light-houses.
G. A. Fairfield.....	do.....	3	45 00	Triangulation, Southern Illinois.
H. W. Blair.....	do.....	3	34 00	Triangulation, Middle Missouri.
R. E. Halter.....	do.....	8	27 00	Triangulation, coast of Texas.
Andrew Braid.....	Leveling.....	4	25 00	Leveling of precision.
E. A. Bowser.....	Triangulation.....	1	125 00	Triangulation, New Jersey.
C. S. Peirce.....	Pendulum observations.....	2	37 00	Pendulum observations.
H. L. Whiting.....	Topography.....	5	68 00	Topography, Hudson River.
John W. Donn.....	Triangulation and topography.....	5	47 50	Triangulation and topography, Jamaica Bay, Long Island, and James River, Virginia.
H. G. Ogden.....	Topography.....	9	33 00	Topography, coast of Maine.
John E. Davies.....	Triangulation.....	4	35 00	Triangulation, Middle and West Wisconsin.
Charles Hosmer.....	Topography.....	3	25 00	Topography, coast of Maine.
A. W. Longfellow.....	do.....	5	30 00	Do.
Wm. Byrd Page.....	Triangulation.....	1	48 00	Triangulation, Middle Kentucky.
R. M. Bache.....	Topography.....	12	22 00	Topography, four parties, Delaware River.
C. M. Bache.....	Triangulation.....	2	30 00	Triangulation, Delaware River.
C. T. Iardella.....	Topography.....	5	23 00	Topography, Cape Fear River, N. C.
C. H. Van Orden.....	Tidal work.....	3	40 00	Tidal work, Buzzard's Bay, Mass.
Fredk. Collins.....	Hydrography.....	1	125 00	Office-work, hydrography of past season.
H. L. Marinden.....	Physical hydrography.....	2	60 00	Physical hydrography, Delaware River.
J. S. Bradford.....	Coast Pilot.....	1	75 00	Coast Pilot publication.
Benjamin Peirce.....	Consulting geometer.....	1	65 00	Party of consulting geometer.
Henry Mitchell.....	Physical hydrography.....	2	30 00	Physical hydrography and tides.
W. E. Greenwell.....	Topography.....	5	27 00	Topography, coast of California.
A. F. Rodgers.....	Triangulation.....	4	45 00	Triangulation, Nevada and Utah.
James S. Lawson.....	do.....	9	40 00	Triangulation, Washington Sound.
B. A. Colonna.....	do.....	9	40 00	Triangulation, coast of California.
L. A. Sengteller.....	Topography.....	6	46 00	Topography, coast of California.
Stelman Forney.....	do.....	7	42 00	Do.
J. J. Gilbert.....	Topography and triangulation.....	9	41 50	Topography and triangulation.
O. H. Tittman.....	Triangulation.....	6	28 00	Hood's Canal, Wash. T.
William Eimbeck.....	do.....	7	30 00	Triangulation, Colorado.
Eugene Elliott.....	Triangulation and topography.....	7	30 00	Triangulation, Nevada.
George Davidson.....	Triangulation.....	9	35 00	Triangulation and topography, Puget Sound, Wash.
Gershom Bradford.....	Hydrography.....	1	100 00	Office, San Francisco, Cal.
D. B. Wainwright.....	Triangulation.....	1	90 00	San Pablo Bay, Cal.
George W. Deap.....	Telegraphic longitudes.....	5	40 00	Primary triangulation.
F. Wally Perkins.....	Triangulation.....	2	55 00	Telegraphic longitudes.
J. A. Sullivan.....	do.....	5	25 00	Triangulation, lower Mississippi River.
J. L. Campbell.....	do.....	4	59 00	Triangulation, Missouri.
E. T. Quimby.....	do.....	1	125 00	Triangulation, Indiana.
Lewis M. Haupt.....	do.....	1	31 00	Triangulation, New Hampshire.
A. H. Buchanan.....	do.....	4	26 00	Triangulation, Pennsylvania.
R. S. Duval.....	do.....	1	125 00	Triangulation, Tennessee.
V. G. Barbour.....	do.....	3	38 00	Triangulation, Ohio.
J. B. Baylor.....	Magnetic observations.....	1	125 00	Triangulation, Vermont.
		3	27 00	Field magnetic work.

The only assistance rendered to the Coast and Geodetic Survey, in addition to the direct appropriation, is from the Navy, in the execution of the hydrography. In this work there are now engaged sixty naval officers, whose difference of pay between sea duty and leave pay is charge-

able to the survey. The number of seamen employed for the full time of the first six months of this fiscal year has been 276, and the cost to the Navy Department about \$13,500 per month for pay and rations of officers and men chargeable to the survey.

I beg to state that in 1859 the number of seamen from the Navy furnished to the survey for hydrographic work was 501, distributed in 14 parties; that now 276 are distributed in 21 parties.

The total number of persons employed for a full period of the six months, exclusive of those from the Navy, and including every one, from the Superintendent to the camp mess-boys, has been 326.

In the ordnance (geodetic and topographical) survey of Great Britain and Ireland (containing an aggregate of 122,000 square miles—within 15,000 square miles of half the area of Texas), now under the civil department of public works, the number of officers and men employed was, in 1873, 2,174. In our Coast and Geodetic Survey, for all land, office, chart, and publication work, 326, or one-sixth that number. The total aggregate employed on the coast and geodetic work, of all officers and men, civilian and naval, is 662, or less than one-third the force employed by Great Britain in land work alone, in an area of less than one-half of Texas.

The Coast and Geodetic Survey receives no assistance from the Army, nor from any other branch of the government, other than that stated from the Navy.

All the assistants and subassistants employed at this date in office work, except five permanently employed in the office, have returned during the last month from field-work. Of the naval officers, two are constantly employed in the office at Washington, and five are temporarily so employed in completing office work of their last season's field-work, from which they have lately returned. All others are in "the field."

Very respectfully,

C. P. PATTERSON,

Superintendent Coast and Geodetic Survey.

COAST AND GEODETIC SURVEY OFFICE,

Washington, January 29, 1879.

